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**EPA Comments on Leachate Seep Investigation Letter Work Plan**

**Karen Cibulskis** to: Quigley, Steve, Paul Jack, jr, Ken Brown, McCready,  
Roger W

03/11/2008 04:38 PM

Cc: vanderpool.luanne, matt.justice, mark.allen, brett.fishwild, tccampbell,  
david.boenker, mankowski.matthew

Hi Steve,

EPA's questions/comments on CRA's February 25, 2008 Leachate Seep Investigation Letter Work Plan are below. Please let me know if you have any questions or would like to discuss any of these questions/comments further.

EPA is not requiring CRA to conduct any additional work for the streamlined FS (e.g., analyze for PCBs, expanded seep inspection areas, etc.). However, if CRA is not going to conduct the work discussed below (and EPA understands why this work may not be needed to support EPA's presumptive remedy for the Site), EPA would like CRA to revise the Leachate Seep Investigation Letter Work Plan to make it clear what work is not being done/the limitations of this Leachate Seep Investigation.

1. Page 1, Visual Seep Inspection. If CRA is inspecting seeps along Site embankments, why isn't CRA inspecting the embankments in Lot 5177?

The Payne Firm Survey (see copy in Appendix M of EPA's Streamline Risk Assessment) indicates there is a steep embankment around parts of the Large Pond (about 14 feet high); a steep east-west embankment (about 12 feet high) north of the air curtain destructor; steep embankments (about 12 feet high) in the area of the Small Pond; and steep embankments in the area of the "ravine" (as high as 15 feet). The Payne Firm Survey also shows water elevations in the Large and Small Ponds to be around 710 feet, and the elevation of the depression at the end of the "ravine" to be elevation 710.9 feet. Since groundwater monitoring in MW-101A and MW-204 closest to these locations has been observed as high as 712 feet it seems like these areas could be seep areas too.

If there are seeps in these areas, which are also within CRA's Direct Contact Presumptive Remedy Area, isn't this something CRA would want to know for developing and evaluating capping alternatives in this area? Or is CRA not including this area because any leachate seeps in Lot 5177 embankments can be determined/investigated during the Remedial Design (RD)? While this approach may be acceptable, the Leachate Seep Investigation Letter Work Plan should be revised to report Lot 5177 embankments as potential seep locations as discussed above, and explain how CRA will address this issue, either for the Feasibility Study (FS) or as something that can be done during RD.

2. Page 1, Visual Seep Inspection. If CRA is inspecting seeps along Site embankments, why isn't CRA inspecting the embankment on the north side of the Site (north of Valley Asphalt) and on the other sides of the Quarry Pond? Is CRA not including these areas because any leachate seeps in the embankments north of Valley Asphalt and around the Quarry Pond can be determined/investigated during the RD? While this approach may be acceptable, the Leachate Seep Investigation Letter Work Plan should be revised to report the embankments north of Valley Asphalt and east of the Quarry Pond as potential seep locations, and explain how CRA will address these embankments, either for the Feasibility Study (FS) or as something that can be done during RD. A figure showing the extent of the areas that will be assessed would be helpful.

3. Page 2, Seep Characterization. It is not clear why CRA is not proposing to analyze liquid seeps or soil samples in the vicinity of active or potential seeps for PCBs. 75 mg/Kg PCBs were detected in the composite Valley Asphalt Drum sample and PCBs have been found in Site soil as high as 7 mg/Kg near the Large Pond (S2 EPA). PCBs were also detected at 2 mg/Kg in soil sample S09 OEPA from the GMR side of the embankment, and in Quarry Pond sediment sample S16 at a concentration of 660 ug/Kg. Since PCBs have been found at the Site and since waste was disposed below the water table CRA should include PCBs as an analytical parameter for liquid seeps (if possible) and for any soil samples in seep



areas. If CRA is not going to include PCBs as an analytical parameter, the Leachate Seep Investigation Letter Work Plan should be revised to report the PCB concentrations discussed above and acknowledge that CRA's leachate seep investigation will not provide any information about PCBs in liquid seeps or soil samples in the vicinity of identified active or potential seeps.

4. Page 2, Seep Characterization. It is not clear why CRA is not proposing to analyze liquid seeps or soil samples in the vicinity of active or potential seeps for asbestos. The notes on the undated tax map indicate brake lining dust was disposed at the Site and internal memoranda from Delco Moraine indicate asbestos waste was disposed at the Site. Since landfilled materials extend below the water table, CRA should include asbestos as an analytical parameter for liquid seeps (if possible) and for any soil samples in seep areas. If CRA is not going to include asbestos as an analytical parameter, the Leachate Seep Investigation Letter Work Plan should be revised to report the disposal of asbestos waste and the presence of landfilled materials below the water table, and acknowledge that CRA's leachate seep investigation will not provide any information about asbestos in liquid seeps or soil samples in the vicinity of identified active or potential seeps.

5. Page 2, Seep Characterization. Since the revised FSP and QAPP have not been submitted, please clarify the analytical parameters are Target Compound List (TCL) VOCs, SVOCs, pesticides, and Target Analyte List (TAL) metals and cyanide.

6. Page 2, Seep Characterization, Paragraph 3. Please revise the Leachate Seep Investigation Work Plan to clarify whether the soil sampling will be conducted during the leachate seep investigation or during the test pit/trench investigation.

7. Page 2, Identify Areas Needing Further Investigation, Line 6. Please change "will require further investigation" to "may require further investigation".

8. Identify Areas Needing Further Investigation, Page 3, Lines 1 and 2: Please change "...then the area where the sample was collected will not require further assessment" to "...then the area where the sample was collected will not require further leachate seep assessment for the purposes of completing the FS. Additional leachate seep assessment at these locations may, however, be required as part of Remedial Design (e.g., for PCBs, asbestos and any other chemicals that may be in leachate seeps or surrounding soils but have not been analyzed for; and/or to evaluate seasonal and/or yearly fluctuations in leachate seeps)."

9. Identify Areas Needing Further Investigation, Page 3, Paragraph 2: What is meant by "exterior to the landfill" and "interior of the landfill"? Perhaps "the area to be evaluated for capping alternatives in the streamlined FS" might be a better term?

10. Page 3, Schedule: Please revise to clarify that the seep investigation will also begin within 2 weeks of USEPA approval of the sections of the FSP and QAPP concerning the leachate seep investigation and EPA review of the revised Health and Safety Plan.



**EPA Mark-Up/Comments on Leachate Letter Work Plan**

**Karen Cibulskis** to: Quigley, Steve, KBrown, jrc, Loney, Adam,  
Almeida, Luis, Paul Jack, roger.mccready

04/02/2008 01:51 PM

Cc: vanderpool.luanne, mankowski.matthew, matt.justice, mark.allen,  
brett.fishwild, david.boehnker, tccampbell

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Hi. Please see attached. Thank you for providing EPA with a MS word version - it was very helpful. I also appreciate your willingness to try to accommodate EPA on the non-technical language changes you expressed at yesterday's meeting. I will be in the office next Monday and Tuesday if you want to have a quick call to discuss any of EPA's leachate mark-ups or comments further.

I will start working on the geophysical investigation comments now and hope to get them to you next week, followed by EPA's comment's on the trench investigation and then landfill gas. Once I get the geophysical comments out and start the trench investigation comments, I will contact you to schedule our next progress call, which was very helpful yesterday.

Thanks, Karen.



Karen Cibulskis  
Remedial Project Manager  
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Region V  
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Dear Karen:

Re: Leachate Seep Investigation Letter Work Plan  
South Dayton Dump and Landfill Site, Moraine, Ohio (Site)

This Letter Work Plan presents the South Dayton Dump and Landfill Potentially Responsible Party Group's (PRP Group's) Work Plan for a leachate seep investigation at the Site. A Site plan is provided on Figure 1. This work will help address data gaps and provide necessary information to aid in the completion of a streamlined Streamlined Feasibility Study (FS) for some portions of the Site landfilled contents and on-Site groundwater. These data will also allow the PRP Group and the United States Environmental Protection Agency (USEPA) to determine which portions of the Site are appropriate for a streamlined FS.

The PRP Group has prepared this Letter Work Plan based on the discussions between the PRP Group and USEPA in February 2008.

The objectives of this Work Plan are to:

1. complete a seep inspection to identify the location, extent and characteristics of seeps observed along Site embankments and in other on-Site and near-Site areas; **ALTHOUGH IT IS LIKELY MOST SEEPS WILL BE FOUND ON SITE EMBANKMENTS, THE OBJECTIVES CANNOT RULE OUT SEEPS FOUND JUST PAST THE TOE OF AN EMBANKMENT OR SEEPS ON FLAT TERRAIN CAUSED BY UPWARD (VERTICAL) HYDRAULIC GRADIENTS (E.G., SMALL POND AND LARGE POND AREA)**
2. ~~potentially~~ characterize seeps observed along Site embankments and in other areas; and
3. identify any area(s) that may require further investigation.

The work associated with achieving these objectives is described further below.

### VISUAL SEEP INSPECTION

CRA will complete a visual inspection of the embankments and nearby areas on the west side of the Site (adjacent to the Great Miami River), to the north including to the north of the Valley Asphalt property, areas surrounding the Quarry Pond, embankments and nearby areas along the central access road, embankments and nearby areas in the vicinity of the air curtain destructor, embankments and area in the

vicinity of the small pond and embankments and area in the vicinity of the Large pond (Figure 2) **PLEASE SHOW AREAS TO BE INSPECTED ON ONE OF CRA'S TOPOGRAPHIC MAPS OF SITE. THIS WILL PROVIDE MORE DETAIL AND MAYBE CAN TAKE PLACE OF FIGURE 1.** This assessment will consist of a visual inspection of the entire embankment surface, nearby areas and low lying areas with an objective to document any evidence of groundwater or leachate discharge from any portion of the bank and other nearby or low-lying areas. Specific items to be investigated include identifying erosion rills, areas of surface staining and/or stressed vegetation, and wet or saturated areas resulting from seeping liquid.

CRA will prepare a photographic log for the inspection. The photographic log will list the date of each photograph, a specific description of what the photograph depicts, its location, and the photographer.

Seep inspections will not be performed during precipitation events and no sooner than 24 hours after a precipitation event. **ALTHOUGH IT WILL BE HARD TO SCHEDULE, SHOULD BE PROVISIONS IN PLACE FOR ADVERSE WEATHER CONDITIONS. THE SEEP INSPECTION SHOULD NOT BE PERFORMED DURING WET WEATHER AND WOULD IDEALLY BE PERFORMED ONLY AFTER SEVERAL DAYS OF DRY CONDITIONS. WET GROUND MAY MAKE IT IMPOSSIBLE TO DIFFERENTIATE SURFACE RUNOFF LOCATIONS FROM SEEPS.**

Potential seeps encountered during the survey, geophysical or other Site work will be flagged, and these areas will be inspected during the seep inspection if the potential seep is encountered prior to this leachate investigation or at a later date if the potential seep is found after the leachate investigation and does not correspond to a previously identified seep.

#### SEEP CHARACTERIZATION

Should leachate seeps, surface staining/stressed vegetation, or other evidence of a leachate seep be identified in any of the embankments or in other areas, CRA will flag the location and survey it using a hand-held global positioning system (GPS) device and record the coordinates. CRA will then record the characteristics for each seep area including color of staining, area of staining, whether the seep is active or not active, estimate of seep flow, color of seep flow, erosion or pooling, odor, PID reading and any other pertinent or identifying details. CRA will also record potential downgradient receptors for each seep, such as landfill interior (where capping alternatives will be evaluated in the Streamlined FS), the Great Miami River, Quarry Pond, etc., After surveying the location and recording seep observations, CRA will proceed to collect leachate and/or soil samples at the identified location before continuing on to the next area. **IS THIS CORRECT? EPA IS LOOKING FOR CLARIFICATION AS TO WHETHER THE SAMPLING WILL BE CONDUCTED AT THE SURVEYED LOCATION BEFORE MOVING ON TO OTHER AREAS OR WHETHER CRA WILL INSPECT THE ENTIRE SITE FOR SEEPS AND THEN COME BACK TO SAMPLE FLAGGED LOCATIONS LATER THAT DAY, THE NEXT DAY OR AT SOME OTHER TIME (AND WHAT THIS TIMEFRAME WOULD BE).**

If an active seep is observed, liquid sampling will be attempted. The area located immediately beneath the seep will be dug out using a clean shovel or trowel. A clean sample jar or pail will be set into the dug out area and the liquid will be allowed to accumulate in the container. The liquid will be transferred to sample containers for submission to the analytical laboratory. As the volume of liquid may be limited, prioritization of requested analyses for the sample will be as follows: Target Compound List (TCL) volatile organic compounds (VOCs), Target Analyte List (TAL) metals and cyanide, TCL semi-volatile organic compounds (SVOCs), TCL pesticides, and TCL polychlorinated biphenyls (PCBs). **HOW WILL CRA MINIMIZE ANY POTENTIAL LOSSES FROM VOLATILIZATION? CAN CRA ATTEMPT TO COLLECT LEACHATE DIRECTLY INTO VOA VIALS? IF THIS DOESN'T WORK, CAN JARS OR PAILS BE SET TO TRY TO GET LEACHATE TO FLOW INTO CONTAINERS INSTEAD OF DRIPPING AND TAKE CARE TO POUR THE SAMPLE SLOWLY, SMOOTHLY AND GENTLY INTO THE VOA VIAL WITHOUT SPLASHING?**

If a sufficient volume of liquid to fill sample jars is not produced by the seep, CRA will collect a sample of the surface soil in the area of the seep. The soil sample will be collected from a saturated portion of the soil immediately beneath the seepage. The surface soil sample will be collected as part of the leachate seep investigation fieldwork and will be analyzed for TCL VOCs, TCL SVOCs, TCL pesticides, TCL PCBs, TAL metals, and asbestos.

If no active seep is observed but indirect evidence of a seep is observed (erosion rills, stressed vegetation, etc.), then CRA will collect a soil surface soil sample from the area where the observation was made. The soil sample will be analyzed for TCL VOCs, TCL SVOCs, TCL pesticides, TCL PCBs, TAL metals, and asbestos.

All work will be performed in accordance with the Field Sampling Plan, Quality Assurance Project Plan, and Site-Specific Health and Safety Plan pending USEPA's approval of these documents.

#### IDENTIFY AREAS NEEDING FURTHER INVESTIGATION

The field observations and analytical data generated from any liquid seep or soil sampling will be reviewed and evaluated. Areas where stressed vegetation was observed may be considered as alternative sampling areas for the test pit/trench investigation. Analytical data will be evaluated against USEPA Region 9 Preliminary Remediation Goals (PRGs). If liquid or soil analytical data indicate that there are ~~some~~ constituents present at concentrations greater than Region 9 PRGs, then the area where the sample was collected may require further investigation or assessment for the Streamlined FS. If liquid or soil sample data do not exceed Region 9 PRGs, then the area where the sample was collected will not require further leachate seep assessment for the purpose of completing the Streamlined FS. Additional leachate seep assessment at these locations may, however, be required as part of Remedial Design (e.g., to evaluate seasonal and/or yearly fluctuations in leachate seeps).

If the soil contains constituents at concentrations greater than the applicable Ecological Screening Criteria, and the seep area is outside the area to be evaluated for capping alternatives

~~in the FS~~, then the area may require further assessment as part of the RI/FS for areas not addressed by the Streamlined FS. If the seep is in the interior of the landfill (where capping alternatives will be evaluated in the Streamlined FS), then the area will be noted and evaluated as part of the Streamlined FS. The assessment and evaluation of data generated as part of this investigation will be presented in a technical memorandum. Modification or adjustments to further investigative work proposed for the Site in 2008 will be discussed with the USEPA prior to implementation.

#### SCHEDULE

The leachate seep inspection will begin within two weeks of USEPA approval of this Letter Work Plan, or the relevant sections of the Field Sampling Plan and Quality Assurance Project Plan, or USEPA's review of the Health and Safety Plan, whichever occurs later, and will be completed over a two-day period of time. The PRP Group will provide the USEPA with written notification one week in advance of the initiation of this activity, and will use extended weather reports in an attempt to time the event during dry weather or no sooner than 24 hours after a precipitation event.

#### REPORTING

The results of the seep inspection and any analytical results (if samples are collected) will be summarized and presented in a technical memorandum. The memorandum, which will include a description of the field work completed, any deviations from the proposed work and the rationale behind the change, photographs, a figure identifying areas inspected, a figure showing the location of identified seeps indicating which seeps, if any, were active at the time of the inspection, analytical summary tables, and analytical data reports, will be provided to the USEPA within one month of the completion of the proposed work. The technical memorandum will also include a table including seep descriptions and approximate elevations (from the Site survey). The data will be used in the Streamlined FS and to identify potential areas where further investigation or assessment may be appropriate.

Should you have any questions on the above, please do not hesitate to contact us.

Yours truly,